

The Frederick County Health Department and the Maryland Department of Health and Mental Hygiene (Center for Environmental Health Coordination) have prepared a set of Frequently Asked Questions that have been raised about cancer incidence in Frederick County.

A. Cancer

1. Who is responsible for collecting information about cancer?

The Maryland Cancer Registry receives information from health care providers, hospitals, and other entities about cancer cases in Maryland. Hospitals, laboratories, radiation facilities, and physicians report cancer and benign central nervous system tumor data quarterly to the Registry. They have 6 months from the date of diagnosis to report a case. Once received, the reports that come in from various sources are “consolidated” into one tumor report. Cancer registration in the US is finalized in each state two years after the end of the diagnosis year. This helps to assure the quality and completeness of the data. Once the data are finalized, the Registry prepares summary statistics for the state. Information on tumor reporting requirements in Maryland can be found at http://www.fha.state.md.us/cancer/mcr_home.cfm. Reports on Cancer in Maryland can be found at http://www.fha.state.md.us/cancer/surv_data-reports.cfm.

2. What is a cancer “cluster?”

The federal Centers for Disease Control and Prevention (CDC) defines a cancer cluster as a greater than expected number of cancer cases within a group of people who are linked by some factors. They may be linked by geography, by type or place of work, or by some other factor such as time. The idea of a cluster is often that some common factor or exposure may be responsible for the cancer. However, this is often difficult to prove, for a number of reasons: (1) Cancer is a common disease; (2) All cancers are not the same, and their causes are often different as well; (3) There may be too few cases to achieve a reasonable level of statistical certainty; and (4) Many cancers have multiple causes.

When trying to determine whether a group of cancers is due to chance alone, or is a true “cluster,” some of the questions that should be asked include:

- (a) Is this the same type of cancer, or is it many different types?;
- (b) Are the cancers occurring in people who typically get this kind of cancer, or are these cancers happening in people who don’t typically get this type of cancer?;
- (c) Are the cancers occurring in people who are known to have a specific exposure?;
- (d) If an exposure is suspected of being related to a cancer, is there a reasonable period of time between when the exposure happened and when the cancer happened (because chemicals that are known to cause cancer typically take several years to several decades between when the exposure happens and when the cancer is finally apparent)?; and
- (e) Are the cancers common cancers, or are they very rare types of cancers?

3. How are cancer concerns investigated in Maryland?

The Maryland Department of Health and Mental Hygiene (DHMH) works with local health departments to investigate concerns about cancer. There is a protocol in which the Maryland Cancer Registry, DHMH Center for Environmental Health Coordination, and the

local health department work together to address the concerns. The investigation may involve several stages, depending on the nature of the concern. Some questions can be answered very simply, using publicly available data. In other cases, more investigation with the Maryland Cancer Registry data is required. If the questions still cannot be answered, a more complex investigation may be initiated. Often, the U.S. Environmental Protection Agency, the federal Agency for Toxic Substances and Disease Registry (ATSDR), or the Maryland Department of the Environment may be needed to help with the evaluation of potential environmental exposures.

4. What type of information is needed to confirm cancer numbers and to investigate a geographic cluster concern?

The Maryland Cancer Registry has the home address at the time of diagnosis for each person reported with cancer. An investigation of a specific part of Maryland will include people with cancer who lived in that area at the time of diagnosis. It will not include people who lived in the area in the past but who have moved away. Information needed would include:

- A) Current -- name, address, and phone of person with a diagnosis of cancer and the name of the person providing this information, and if the person providing the information is not the person who was diagnosed with cancer what is the relationship to the person diagnosed with cancer and has that person granted permission for this person to share the information;
- B) At time of diagnosis – name, age, date, address, type and location of cancer;
- C) Time period (list years) spent in the geographic area of concern;
- D) How or why the person diagnosed with cancer is associated with the geographic area of concern (e.g. home, work, hobby, and etc.); and
- E) Whether the person diagnosed with cancer is living or deceased.

5. What is the relationship between cancer and environmental exposures?

Very few cancers are known to be caused solely by environmental chemicals. The best known example of this is mesothelioma, which is almost always associated with asbestos exposure. However, most cancer is caused by some combination of genetic factors, personal behaviors, and environmental factors. This makes it hard in most cases to determine whether a particular cancer in one person is due to environmental factors. This question is also complicated because in many cases the exposure that might have caused the cancer took place years or decades before the individual developed cancer symptoms. Since the Maryland Cancer Registry reports contain the individual's home address at the time of diagnosis, an investigation "looking back" at home residence locations in the Maryland Cancer Registry would be limited to cases residing in the area of interest at the time of diagnosis and would miss persons who may have lived elsewhere at the time of diagnosis. This makes it harder to figure out how to interpret current exposure information because the exposure that might have caused the disease took place years, even decades, in the past.

6. How much cancer is there in Frederick?

Cancer is generally measured in two ways, by *incidence* (the number of new cases relative to the whole population) and *mortality* (the number of deaths relative to the whole population). In Frederick County as a whole, the incidence rate for all cancers is 541.4 cases of cancer per 100,000 persons, which is higher than the state average of 463.2 cases per 100,000 persons (based on 2002-2006 data from the state cancer profiles data base of CDC). However, the mortality rate for cancer in Frederick County for the same period was 187.6 per 100,000 persons, which is similar to the Maryland state average of 193.3 deaths per 100,000 persons. The CDC's data site can be found at <http://statecancerprofiles.cancer.gov/map/map.withimage.php?24&001&090&00&0&1&0&1&5&0#map>.

The Frederick County Health Department conducted a Community Health Assessment in 2007 by surveying Frederick County residents. Participants were asked about a past diagnosis of non-skin cancer and modifiable risk factors associated with the development of cancer. The responses were then reported out separately for participants from Central Frederick County, Northern Frederick County, and Southern Frederick County. The full Community Health Assessment can be found at <http://www.frederickcountymd.gov/index.aspx?NID=2371>.

For more information: *Question and Answers about Cancer Clusters* (Maryland Department of Health and Mental Hygiene)
http://fha.maryland.gov/pdf/cancer/mcr_combined_cancer_cluster.pdf

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